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### AMENDMENTS TO THE CLAIMS

**Please amend Claims 1, 11, 13, 14, 23, 29-31, and 34, as indicated below.**

**Please cancel Claims 21, 22, 32, and 33 without prejudice.**

A complete listing of all claims is presented below with insertions underlined (e.g., insertion), and deletions struckthrough or in double brackets (e.g., ~~deletion~~ or [[deletion]]):

1. (Currently Amended) A thermoelectric system comprising:  
a plurality of thermoelectric modules; and  
a plurality of first and second heat transfer devices, at least some of the first heat transfer devices sandwiched between at least two thermoelectric modules, and at least some of the second heat transfer devices sandwiched between at least two thermoelectric modules, so as to form at least one stack of thermoelectric modules with alternating first and second heat transfer devices, wherein at least some of the first heat transfer devices and at least some of the second heat transfer devices project away from the at least one stack in differing directions, and wherein at least some of the first or second heat transfer devices are arranged to provide thermal isolation in the direction of a working medium movement.
2. (Previously Presented) The thermoelectric system of Claim 1, further comprising a current source electrically coupled to the stack, the current traversing at least some of the heat transfer devices and thermoelectric modules in series.
3. (Previously Presented) The thermoelectric system of Claim 1, wherein the heat transfer devices thermally isolate at least some of the thermoelectric modules from at least some other of the thermoelectric modules.
4. (Previously Presented) The thermoelectric system of Claim 1, wherein the working medium comprises a working fluid.
5. (Previously Presented) The thermoelectric system of Claim 1, wherein at least some of the heat transfer devices are heat exchangers having a plurality of heat exchanger elements.
6. (Previously Presented) The thermoelectric system of Claim 1, wherein at least some of the first heat transfer devices are constructed of an electrode portion electrically isolated from and thermally coupled to a shunt portion.

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7. (Previously Presented) The thermoelectric system of Claim 1, wherein at least some of the thermoelectric modules comprise thermoelectric elements.

8. (Previously Presented) The thermoelectric system of Claim 7, wherein the thermoelectric elements comprise alternating P-type and N-type thermoelectric elements.

9. (Previously Presented) The thermoelectric system of Claim 1, wherein the direction of working medium movement is from a first stack to a second stack.

10. (Previously Presented) The thermoelectric system of Claim 1, wherein the direction of working medium movement is generally in the direction of the at least one stack.

11. (Currently Amended) A thermoelectric system comprising:

a plurality of thermoelectric modules; and

a plurality of first heat transfer devices and a plurality of second heat transfer devices, at least some of the first heat transfer devices sandwiched between at least two thermoelectric modules, and at least some of the second heat transfer devices sandwiched between at least two thermoelectric modules, so as to form at least one stack of thermoelectric modules with alternating first and second heat transfer devices, wherein at least some of the first heat transfer devices and at least some of the second heat transfer devices project away from the at least one stack and wherein at least the first or second heat transfer devices accept at least one medium, the medium being a liquid and/or a solid.

12. (Previously Presented) The thermoelectric system of Claim 11, wherein at least some of the first heat transfer devices and at least some of the second heat transfer devices project away from the at least one stack in differing directions.

13. (Currently Amended) The thermoelectric system of Claim 11, wherein at least some of the first heat transfer devices accept a first medium and at least some of the second heat transfer devices accept a second medium, the first medium being a liquid and/or a solid[.], and the second medium selected from a group consisting of a liquid, a solid, a gas or any combination of a liquid, a solid and a gas.

14. (Currently Amended) The thermoelectric system of Claim 11, wherein the first medium is liquid and the second medium is a gas.

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15. (Previously Presented) The thermoelectric system of Claim 11, wherein the at least one medium moves, and at least some of the first or second heat transfer devices are arranged to provide thermal isolation in the direction of the at least one medium movement.

16. (Previously Presented) The thermoelectric system of Claim 11, further comprising a current source electrically coupled to the stack, the current flowing through the heat transfer devices and thermoelectric modules.

17. (Previously Presented) The thermoelectric system of Claim 11, wherein at least some of the first thermoelectric modules comprise P-type thermoelectric elements and at least some of the second thermoelectric modules comprise N-type thermoelectric elements, and wherein the heat transfer devices thermally isolate at least some of the P-type thermoelectric elements from at least some of the N-type thermoelectric elements.

18. (Previously Presented) The thermoelectric system of Claim 11, wherein the at least one medium is a moving working medium.

19. (Previously Presented) The thermoelectric system of Claim 11, wherein the at least one heat transfer devices are heat exchangers having heat exchanger elements.

20. (Previously Presented) The thermoelectric system of Claim 11, wherein at least some of the first heat transfer devices are constructed of an electrode portion electrically isolated from and thermally coupled to a shunt portion.

21.-22. (Cancelled)

23. (Currently Amended) A thermoelectric system comprising:

a plurality of thermoelectric modules, wherein at least some of the thermoelectric modules are sized to provide high power density operation; and

a plurality of first heat transfer devices and a plurality of second heat transfer devices, at least some of the first heat transfer devices sandwiched between at least two of the thermoelectric modules, and at least some of the second heat transfer devices sandwiched between at least two of the thermoelectric modules, so as to form a stacked configuration of thermoelectric modules with alternating first and second heat transfer devices, wherein at least some of the plurality of thermoelectric modules are N-type thermoelectric elements and at least some of the thermoelectric modules are P-type thermoelectric elements~~The thermoelectric system of Claim 22, wherein at least some of the N-type and or P-type thermoelectric elements are between 5 microns and~~

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1.2 millimeters thick with relatively large ratio of area to the length in the direction of current flow of the thermoelectric elements.

24. (Previously Presented) The thermoelectric system of Claim 23, wherein the ratio is about 6 to 1.

25. (Previously Presented) The thermoelectric system of Claim 23, wherein at least some of the N-Type and or P-type thermoelectric elements are between 20 microns and 300 microns thick.

26. (Previously Presented) The thermoelectric system of Claim 23, wherein at least some of the N-Type and or P-type thermoelectric elements are between 20 microns and 200 microns thick.

27. (Previously Presented) The thermoelectric system of Claim 23, wherein at least some of the N-Type and or P-type thermoelectric elements are between 20 microns and 100 microns thick.

28. (Previously Presented) The thermoelectric system of Claim 23, wherein at least some of the N-Type and or P-type thermoelectric elements are between 100 microns and 600 microns thick.

29. (Currently Amended) A thermoelectric system comprising:  
a plurality of thermoelectric modules, wherein at least some of the thermoelectric  
modules are sized to provide high power density operation; and  
a plurality of first heat transfer devices and a plurality of second heat transfer  
devices, at least some of the first heat transfer devices sandwiched between at least two of  
the thermoelectric modules, and at least some of the second heat transfer devices  
sandwiched between at least two of the thermoelectric modules, so as to form a stacked  
configuration of thermoelectric modules with alternating first and second heat transfer  
devices~~The thermoelectric system of Claim 21, wherein at least some of the first or~~  
second heat transfer devices are arranged to provide thermal isolation in the direction of a working medium flow.

30. (Currently Amended) A thermoelectric system comprising:  
a plurality of thermoelectric modules, wherein at least some of the thermoelectric  
modules are sized to provide high power density operation;

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a plurality of first heat transfer devices and a plurality of second heat transfer devices, at least some of the first heat transfer devices sandwiched between at least two of the thermoelectric modules, and at least some of the second heat transfer devices sandwiched between at least two of the thermoelectric modules, so as to form a stacked configuration of thermoelectric modules with alternating first and second heat transfer devices; and~~The thermoelectric system of Claim 21, further comprising~~

a current source electrically coupled to the stack, the current traversing through the heat transfer devices and thermoelectric modules in series.

31. (Currently Amended) A thermoelectric system comprising:

a plurality of thermoelectric modules, wherein at least some of the thermoelectric modules are sized to provide high power density operation; and

a plurality of first heat transfer devices and a plurality of second heat transfer devices, at least some of the first heat transfer devices sandwiched between at least two of the thermoelectric modules, and at least some of the second heat transfer devices sandwiched between at least two of the thermoelectric modules, so as to form a stacked configuration of thermoelectric modules with alternating first and second heat transfer devices, wherein at least some of the plurality of thermoelectric modules are N-type thermoelectric elements and at least some of the thermoelectric modules are P-type thermoelectric elements~~The thermoelectric system of Claim 22, wherein the heat transfer devices thermally isolate at least some of the P-type thermoelectric elements from at least some of the N-type thermoelectric elements.~~

32.-33. (Cancelled)

34. (Currently Amended) A thermoelectric system comprising:

a plurality of thermoelectric modules, wherein at least some of the thermoelectric modules are sized to provide high power density operation; and

a plurality of first heat transfer devices and a plurality of second heat transfer devices, at least some of the first heat transfer devices sandwiched between at least two of the thermoelectric modules, and at least some of the second heat transfer devices sandwiched between at least two of the thermoelectric modules, so as to form a stacked configuration of thermoelectric modules with alternating first and second heat transfer devices~~The thermoelectric system of Claim 21, wherein at least some of the first heat~~

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transfer devices are constructed of an electrode portion electrically isolated from and thermally coupled to a shunt portion.